Specific Comment No. 2(a) – The comment has not been adequately addressed by the revisions made to the fourth paragraph in Section 2.6.1.1. A better description of the geometry of the San Mateo Creek alluvial channel and ground water flow into the site is needed. Therefore, please replace the paragraph with the following:

The San Mateo alluvial system at the northern portion of the site along County Road 63 is characterized by a deeper paleochannel under the western portion of the LTP with a gradual slope to the east and a bedrock ridge creating a discontinuity in the alluvial sediments to the west. These features are shown in the base of alluvium mapping depicted on Figure 2-21 and in cross sections interpreted from geophysics on Figures 2-47 and 2-48. The bedrock ridge, which trends roughly north-south, was encountered in a number of borings, including SX, SW, S12, S and, most recently, BK4. Refer to Figure 2-46 for the location of the borings. At boring BK4 a sandstone unit was encountered at 35 feet bgs. The sandstone is permeable and saturated at 43 feet bgs. However, at historical water levels and likely future water levels, the ridge may have some effect on alluvial ground water flow coming into the site from the north, especially when considering that historic water levels of the alluvial aquifer were significantly lower than they are today. The lower water levels measured in 1960 by Chavez indicate that the ridge would have been more pronounced barrier to ground water flow than it is today, possibly resulting in local braiding of the alluvial aquifer at the northwest corner of the LTP. See cross-section shown on Figure 2-30.

Specific Comment No. 2(c) – The comment has not been adequately addressed by the revised text in the last paragraph on page 2-7. First, based on Figure 2-27 the measured hydraulic conductivities range from less than 1 to over 200 ft/day. Please revise to accurately depict the range. Second, the discussion of the low values due west of the LTP do not include the relevance or potential impact of the bedrock ridge on the values. The values in this area of the site are some of the lowest recorded that are not on the eastern or western margins of the alluvial channel. Shown below is a portion of Figure 2-21 showing the base of alluvium mapping with the low hydraulic conductivity values from Figure 2-27 overlain on the map. Please include a discussion in the report on whether the proximity of the bedrock ridge could be affecting the hydraulic conductivity at locations downgradient of the ridge. Note that on this figure, EPA has recontoured some of the base of alluvium elevations (in green) to honor the data points. The mapping effort shows the bedrock ridge to extend further to the south than Figure 2-21.

The San Mateo alluvial aquifer generally behaves as an unconfined aquifer with specific yields ranging from 0.038 to 0.28. A specific yield of 0.1 is assumed to best represent the alluvial aquifer at the Site (HMC 2019d). Measured hydraulic conductivity values range from less than 1 to more than 200 ft/day. Figure 2-27 presents the hydraulic conductivities measured for the alluvial aquifer from pump tests. These values are, in general, locally consistent and are likely derived from the depositional environment. Specific examples of this consistency are areas where basalt is interbedded within the alluvium and generates high hydraulic conductivities in the Rio San Jose alluvium and the western extents of the San Mateo Creek alluvium, and low values found in areas adjacent to the historical streambed during deposition that likely received finer grained material such as the area due west of the LTP. This area of low hydraulic conductivity is also downgradient of the bedrock ridge described in the preceding paragraph. Low hydraulic conductivity found in this area support the interpretation of fine grained deposition in areas beyond the extent of the paleochannel. Groundwater elevations within the alluvial aquifer ranged from approximately 6,427 to 6,604 feet above msl during December 2010. Groundwater flows in the alluvial aquifer at the Site are generally follow topography to the southwest (HMC 2012).